



Cal Val Rehearsal 1
Status
NGAS Ocean Color Tools OMT & PVT

July 22, 2011

Patty Pratt
NGAS CalVal Ocean Color Lead

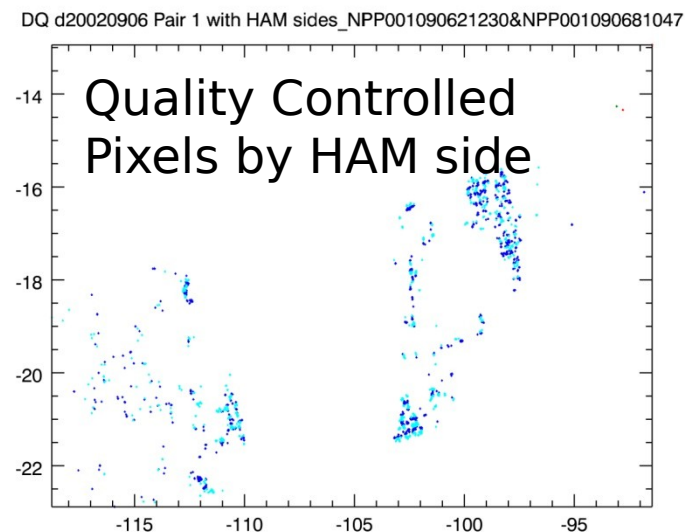
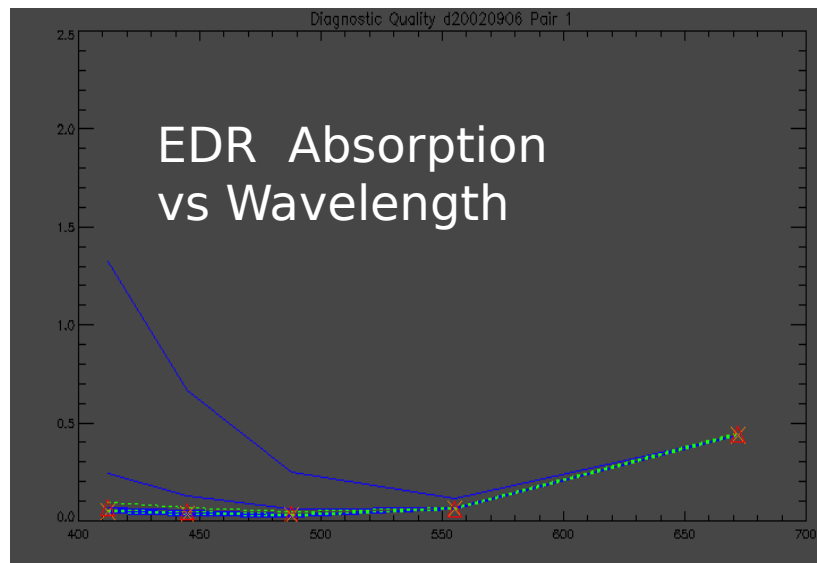
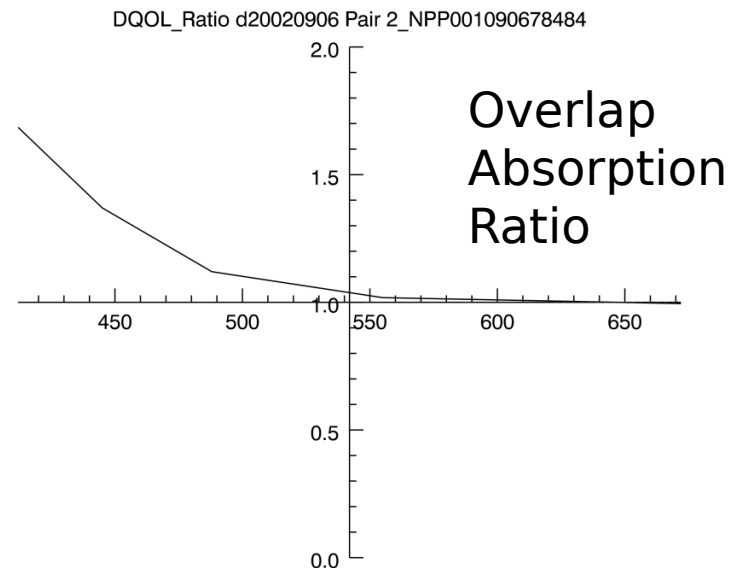
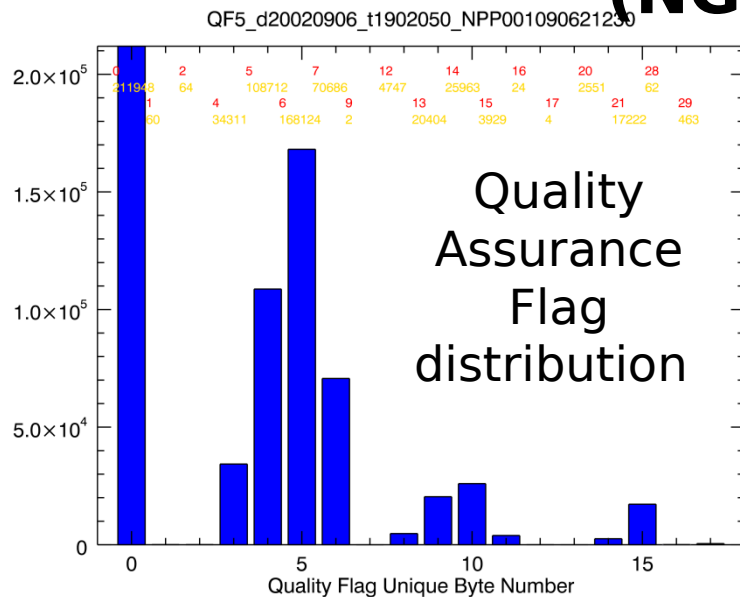
Mark pages according to the proprietary level of
information as described in Company Procedure
J103 (or remove)

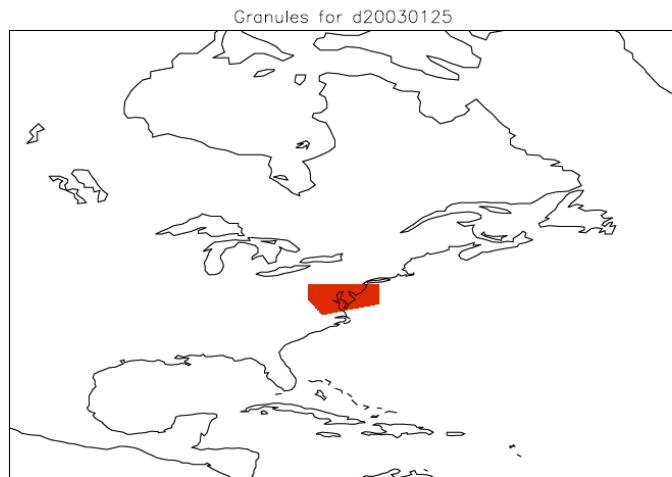
Overlap Matchup Tool (OMT)

- Phase 1 delivered SC7 build Test data
- Phase 2 in progress NCT3 Test data
 - on NSIPS NCT4 Orbit 12 test data
- currently testing NSIPS integration

Note: all results are **MODIS proxy = NO science quality**

Results for SC7 test data (July 2010) for SPG (NGAS -Pratt)





VOCCO_npp_d20030125_t1707000_e1708245_b00020_c20110608224301837253_ngas_ada.h5
 GMTCO_npp_d20030125_t1707000_e1708245_b00020_c20110608224301837730_ngas_ada.h5
 SVM07_npp_d20030125_t1707000_e1708245_b00020_c20110608223718643376_ngas_ada.h5

Band GranuleIndex Longitude Latitude detector scan HAMside pixel SCpositionX SCpositionY
 nLw absorption backscatter chlorophyll SensorAzimuth SensorZenith SolarAzimuth SolarZenith
 TOAreflectance QFlag1 QFlag2 QFlag3 QFlag4 QFlag5 QFlag6 QFlag7

1	2087667	-73.06504	39.52354	3	15	1	2718	2.550310e+06	0.000000e+00	4.800908e+06
5.949969e+01	8.933352e-02	8.097176e-02	7.971883e-01	7.052901e+01	5.646599e+01	-1.791973e+02				
5.847179e+01	2.730844e-01	255 255 92 160	4 201 17							
1	2089959	-73.05604	39.45928	7	14	0	2721	2.557408e+06	0.000000e+00	4.791200e+06
5.691224e+01	8.997820e-02	7.790937e-02	7.333914e-01	7.082026e+01	5.653819e+01	-1.791950e+02				
5.840756e+01	2.696904e-01	255 255 92 160	4 201 17							
1	2089960	-73.06057	39.46956	8	14	0	2721	2.557408e+06	0.000000e+00	4.791200e+06
5.636083e+01	8.567788e-02	7.615952e-02	7.360705e-01	7.088573e+01	5.653798e+01	-1.792001e+02				
5.841778e+01	2.691043e-01	255 255 92 160	4 201 17							
1	2090727	-73.06441	39.45704	7	14	0	2722	2.557408e+06	0.000000e+00	4.791200e+06
5.646898e+01	9.104796e-02	7.778067e-02	7.017624e-01	7.081495e+01	5.656281e+01	-1.792043e+02				
5.840522e+01	2.692020e-01	255 255 92 160	4 201 17							
1	2090728	-73.06894	39.46731	8	14	0	2722	2.557408e+06	0.000000e+00	4.791200e+06
5.569683e+01	8.613773e-02	7.585515e-02	7.109975e-01	7.088040e+01	5.656261e+01	-1.792094e+02				
5.841545e+01	2.683718e-01	255 255 92 160	4 201 17							
1	2090729	-73.07348	39.47759	9	14	0	2722	2.557408e+06	0.000000e+00	4.791200e+06
5.675848e+01	9.403582e-02	7.926033e-02	7.226073e-01	7.094585e+01	5.656247e+01	-1.792146e+02				
5.842568e+01	2.697392e-01	255 255 92 160	4 201 17							
1	2091499	-73.09097	39.49591	11	14	0	2723	2.557408e+06	0.000000e+00	4.791200e+06
5.769682e+01	8.852953e-02	7.793866e-02	7.445306e-01	7.107133e+01	5.658699e+01	-1.792341e+02				
5.844381e+01	2.711310e-01	255 255 92 160	4 201 17							
1	2092262	-73.07663	39.44223	6	14	0	2724	2.557408e+06	0.000000e+00	4.791200e+06
6.044670e+01	9.123519e-02	8.398809e-02	8.290958e-01	7.073891e+01	5.661234e+01	-1.792178e+02				
5.839029e+01	2.741099e-01	255 255 92 160	4 201 17							
1	2092265	-73.09026	39.47310	9	14	0	2724	2.557408e+06	0.000000e+00	4.791200e+06
5.744529e+01	9.221382e-02	7.941888e-02	7.536898e-01	7.093513e+01	5.661174e+01	-1.792331e+02				
5.842101e+01	2.707159e-01	255 255 92 160	4 201 17							
1	2092267	-73.09937	39.49368	11	14	0	2724	2.557408e+06	0.000000e+00	4.791200e+06
5.821695e+01	9.793015e-02	8.387822e-02	7.735997e-01	7.106592e+01	5.661163e+01	-1.792434e+02				
5.844149e+01	2.718391e-01	255 255 92 160	4 201 17							

This file contains detailed flag information extracted from the following granule(s):
 NPP001212376180
 GMTCO_npp_d20030125_t1707000_e1708245_b00020_c20110608224301837730_ngas_ada.h5
 SVM07_npp_d20030125_t1707000_e1708245_b00020_c20110608223718643376_ngas_ada.h5
 VOCCO_npp_d20030125_t1707000_e1708245_b00020_c20110608224301837253_ngas_ada.h5

This subsetted granule has a total of 2326 pixels.
 The linear boundaries in this granule are:
 40.3499 North 36.3650 South
 -79.0000 East -73.0000 West

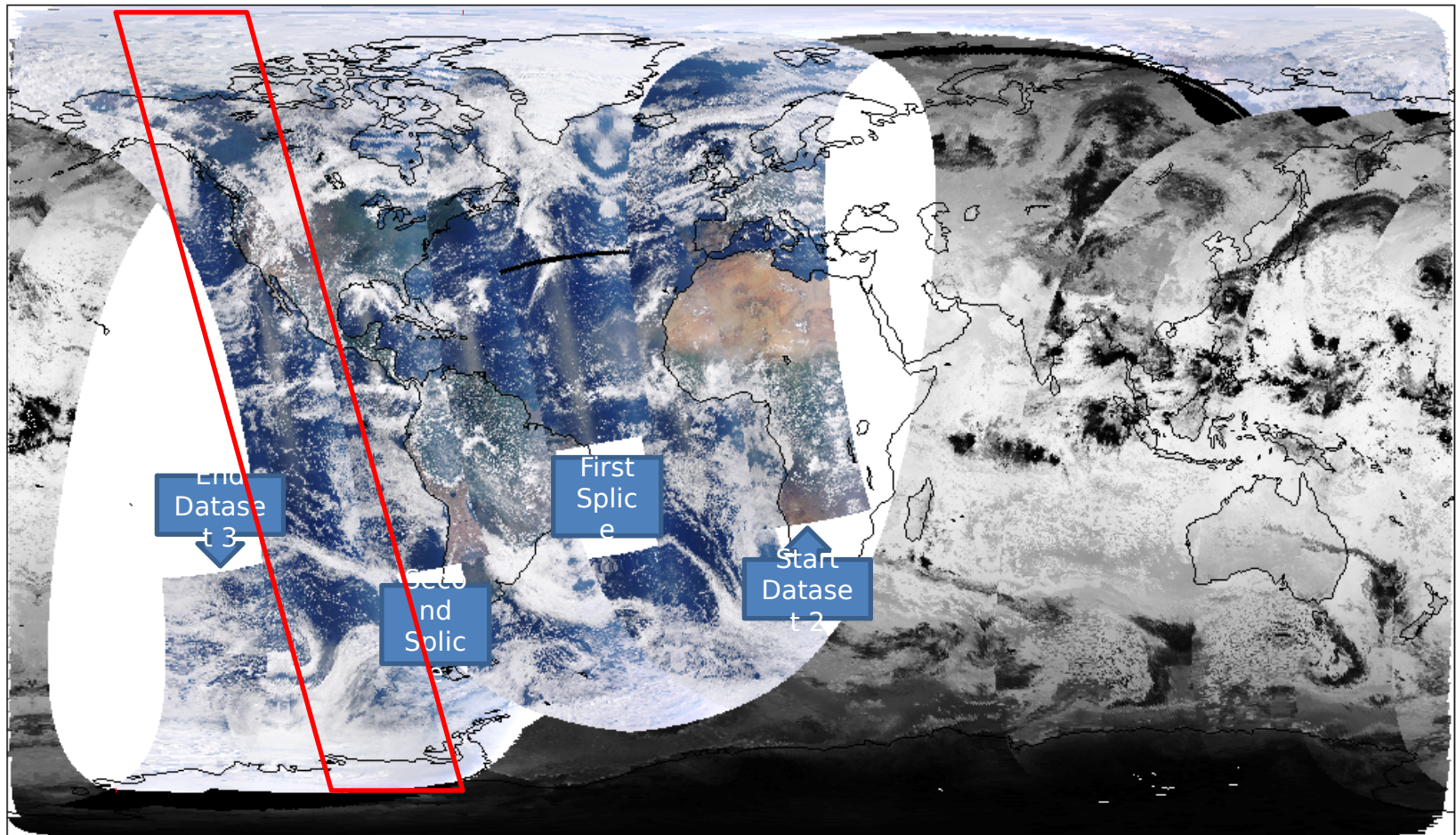
2326 or 100.000% pixels are in the Ocean.
 0 or 0.00000% are in the coastal zone.
 IOP-absorption was retrieved for 2326 or 100.000% pixels.
 The number of Confidently Clear pixels is 2326 or 100.000%.
 The number of pixels Probably Clear is 1 or 0.0429923%.
 The number of Adjacent Confidently Clear pixels is 2312 or 99.3981%.
 The number of Cirrus pixels is 1 or 0.0429923%.
 The number of Sun Glint pixels is 1 or 0.0429923%.
 The number High Wind pixels is 151 or 6.49183%.
 The number of Cloud Shadow pixels is 1 or 0.0429923%.
 The number of Atmospheric Failures is 139 or 5.97592%.
 The number of pixels flagged with the Bright Pixel Algorithm is 1 or 0.0429923%.
 The Chlorophyll Concentration was computed using Carder with Carder default.

Results for NCT3 test data (June 2011) from NGAS ADA

NPP Retrieved data for Chesapeake Bay (NGAS -Pratt) processed by (OMT) for example demo with Ondrusek (NOAA) Matchups

NCT4 Dry Run Data

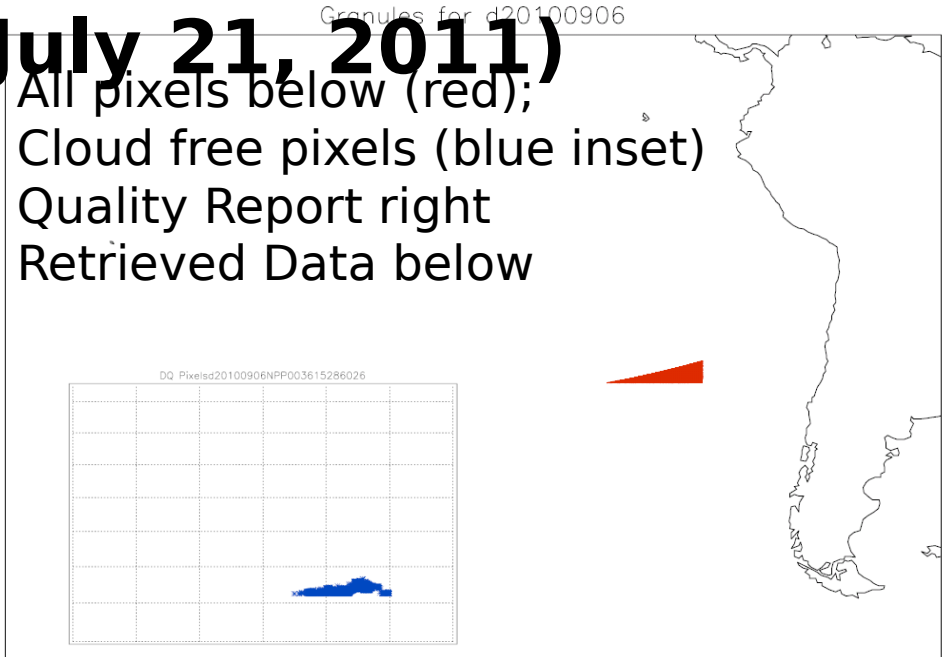
The 12th orbit is the middle section of the last 3rd of the 6-Orbit Dataset, i.e., little after the “Second Splice” below, starting over North America, down through middle Asia and the Indian Ocean in night time, and up the South Pacific



Results from ORBIT 12 Test data pulled from NSIPS

(July 21, 2011)

- All pixels below (red);
- Cloud free pixels (blue inset)
- Quality Report right
- Retrieved Data below



Code and output is automated on NSIPS

(can be configured for your own RO)

```
This file contains detailed tag information extracted from the following
granule(s):
NP0001615286026
GMTCO_npp_d20100906_t2036421_e2038066_b00012_c20110707163142311613_noaa_o
ps.h5
SVM07_npp_d20100906_t2036421_e2038066_b00012_c20110707160532032241_noaa_o
ps.h5
VOCCO_npp_d20100906_t2036421_e2038066_b00012_c20110707163142311860_noaa_o
ps.h5
This subsetting granule has a total of 27498 pixels.
The linear boundaries in this granule are:
-30.9514 North -35.0000 South
-105.221 East -85.0000 West
27498 or 100.000% pixels are in the Ocean.
0 or 0.00000% are in the coastal zone.
IOP-absorption was retrieved for 27498 or 100.000% pixels.
The number of Confidently Clear pixels is 27498 or 100.000%.
The number of pixels Probably Clear is 1 or 0.00363663%.
The number of Adjacent Confidently Clear pixels is 4341 or 15.7866%.
The number of Cirrus pixels is 245 or 0.890974%.
The number of Sun Glint pixels is 1 or 0.00363663%.
The number High Wind pixels is 7771 or 28.2602%.
The number of Cloud Shadow pixels is 1357 or 4.93490%.
The number of Atmospheric Failures is 27498 or 100.000%.
The number of pixels flagged with the Bright Pixel Algorithm is 1 or
0.00363663
%.
The Chlorophyll Concentration was computed using Carder with Carder
default.
```

VOCCO_npp_d20100906_t2036421_e2038066_b00012_c20110707163142311860_noaa_ops.h5
GMTCO_npp_d20100906_t2036421_e2038066_b00012_c20110707163142311613_noaa_ops.h5
SVM07_npp_d20100906_t2036421_e2038066_b00012_c20110707160532032241_noaa_ops.h5
Band GranuleIndex Longitude Latitude detector scan HAMside pixel SCpositionX SCpositionY SCpositionZ
nIw absorption backscatter chlorophyll SensorAzimuth SensorZenith SolarAzimuth SolarZenith
TOAreflectance QFlag1 QFlag2 QFlag3 QFlag4 QFlag5 QFlag6 QFlag7
1 508035 -90.01365 -34.99981 3 24 0 661 -9.436154e+05 0.000000e+00 -4.298228e+06
6.000443e+01 5.628505e-03 3.629334e-03 0.100027e-04 1.060086e+02 5.191737e+01 -5.034100e+01
5.570243e+01 3.540525e-01 229 171 0 0 0 40 31
1 508036 -90.01703 -34.99017 4 24 0 661 -9.436154e+05 0.000000e+00 -4.298228e+06
6.027161e+01 5.761097e-03 4.000905e-03 9.991539e-05 -1.060796e+02 5.191732e+01 -5.034291e+01
5.569415e+01 3.531002e-01 229 171 0 0 0 40 31
1 508037 -90.02041 -34.98052 5 24 0 661 -9.436154e+05 0.000000e+00 -4.298228e+06
5.983809e+01 5.934247e-03 4.203601e-03 1.620426e-04 -1.061505e+02 5.191733e+01 -5.034483e+01
5.568586e+01 3.535886e-01 229 171 0 0 0 40 31
1 508038 -90.02379 -34.97089 6 24 0 661 -9.436154e+05 0.000000e+00 -4.298228e+06

Latest from NSOF re: integration of OMT

IDL wants access to an X11 display. It fails if the DISPLAY environment variable isn't set, or if that display isn't accessible to the process--which certainly is not guaranteed for a PGE. After a run that seemed to bypass the IDL bit a manually invoked the IDL process appeared to run to completion and produced output.

This demonstrates that NSIPS did the setup correctly, and that the IDL license isn't an issue.

Steps forward:

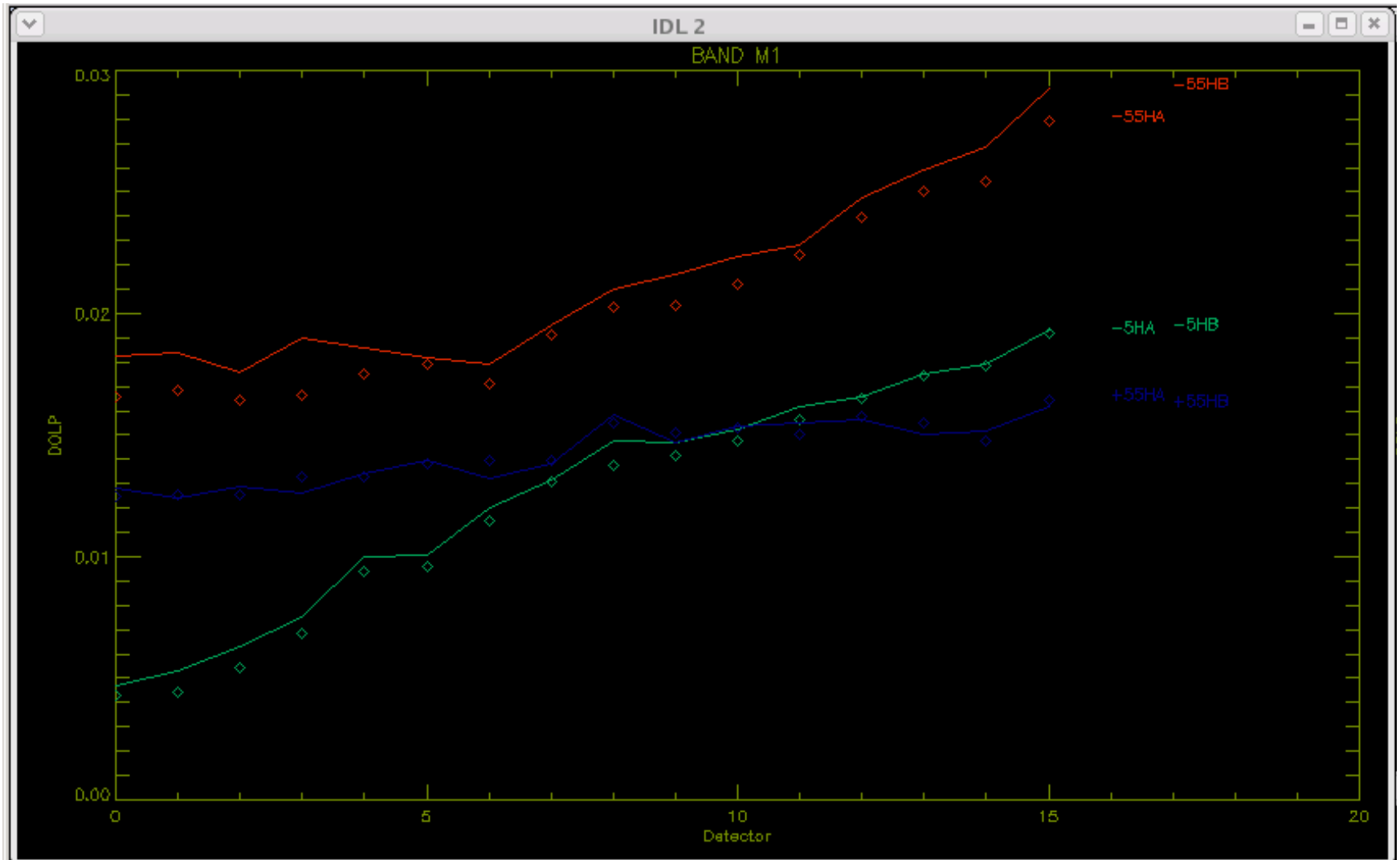
- Research the X11 issue,
- Incorporate any new fix
- Attempt new run

Output may be available for ordering from NSIPS sometime Friday 07/22/2011

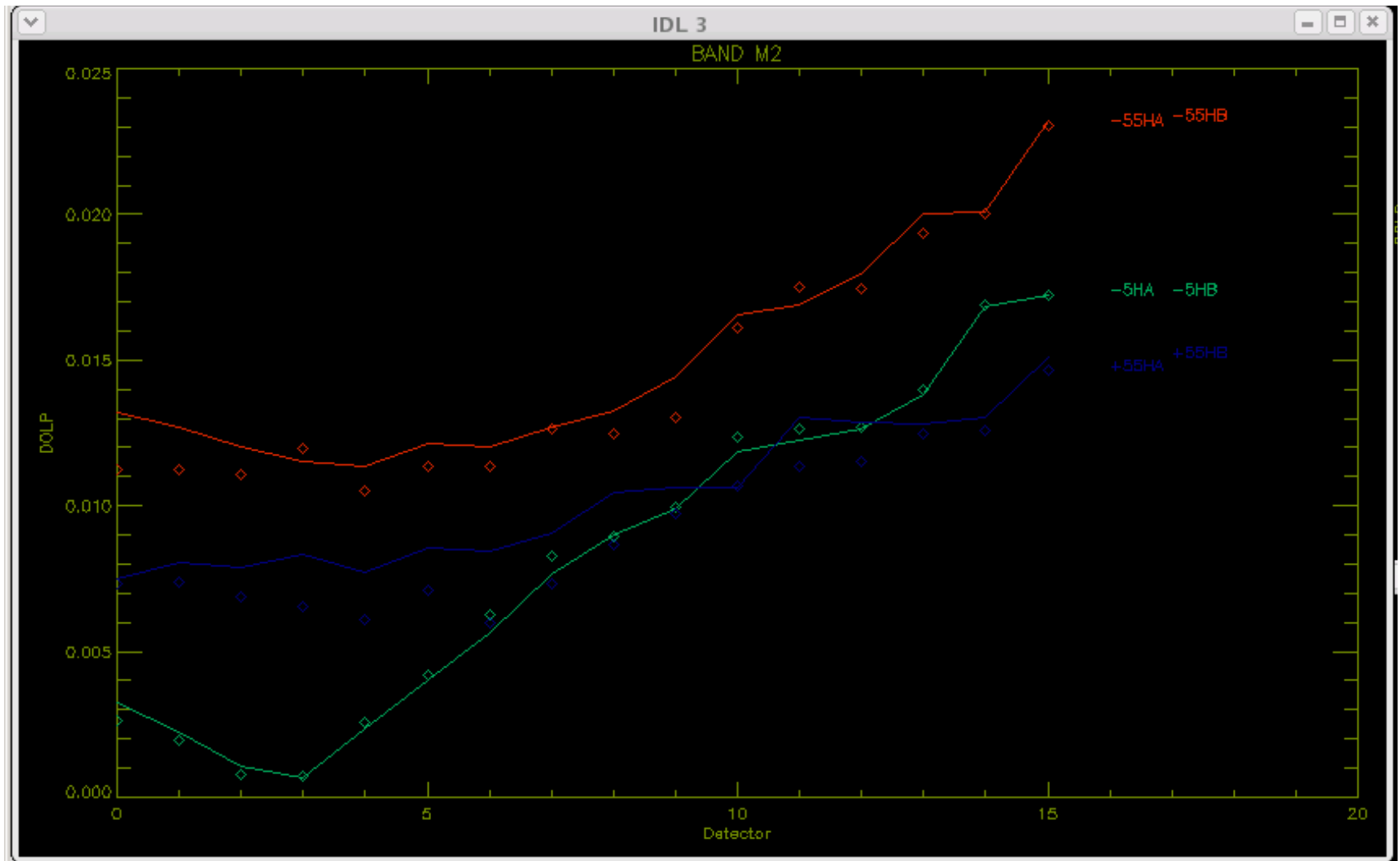
Polarization Verification Tool Phase 1

PVT LUT Analyzer
view/analyze new LUTs
will interface with OMT
for increased functionality

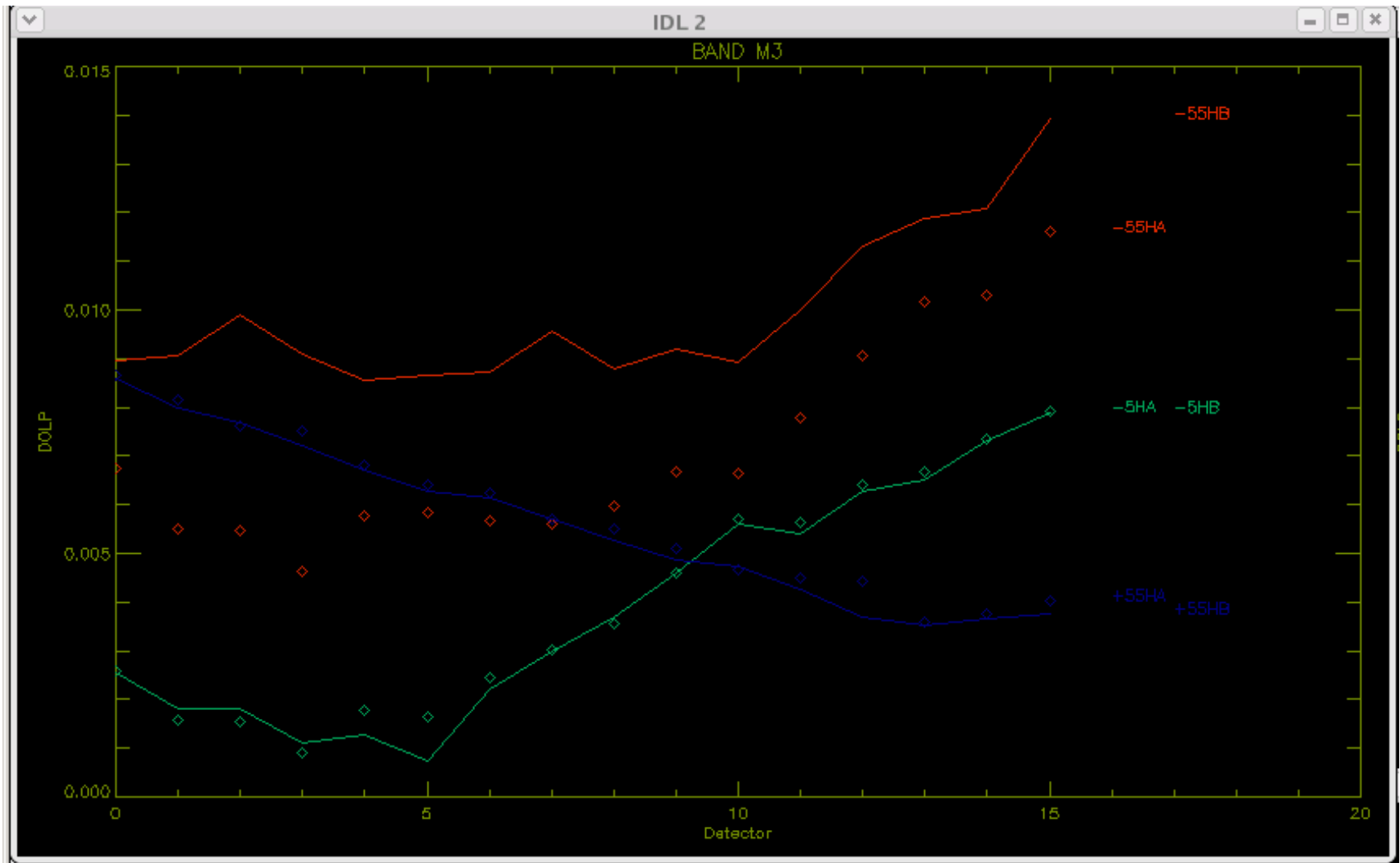
M1 detector dependence and HAMA vs HAMB for 3 scan angles



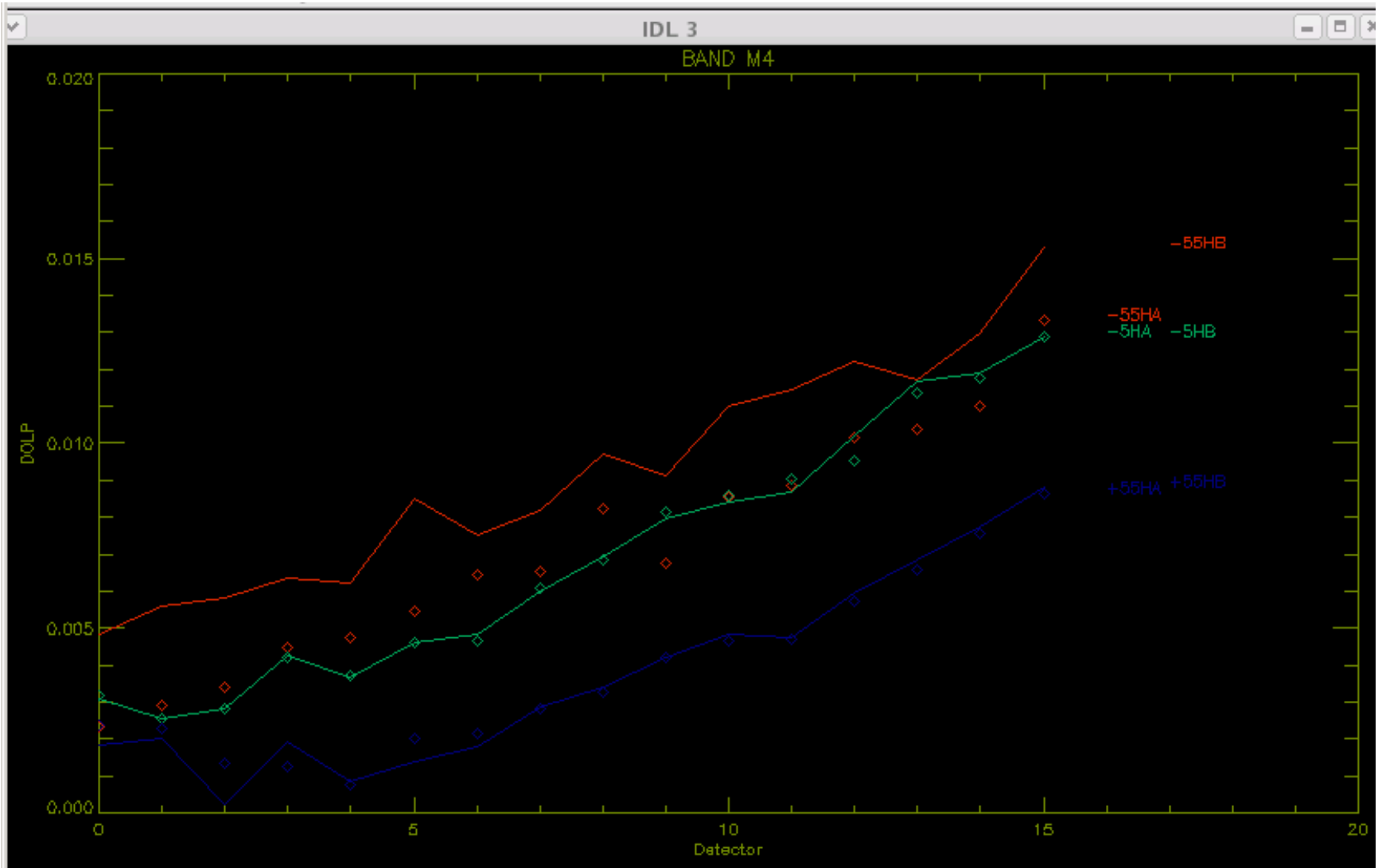
M2 detector dependence and HAMA vs HAMB for 3 scan angles



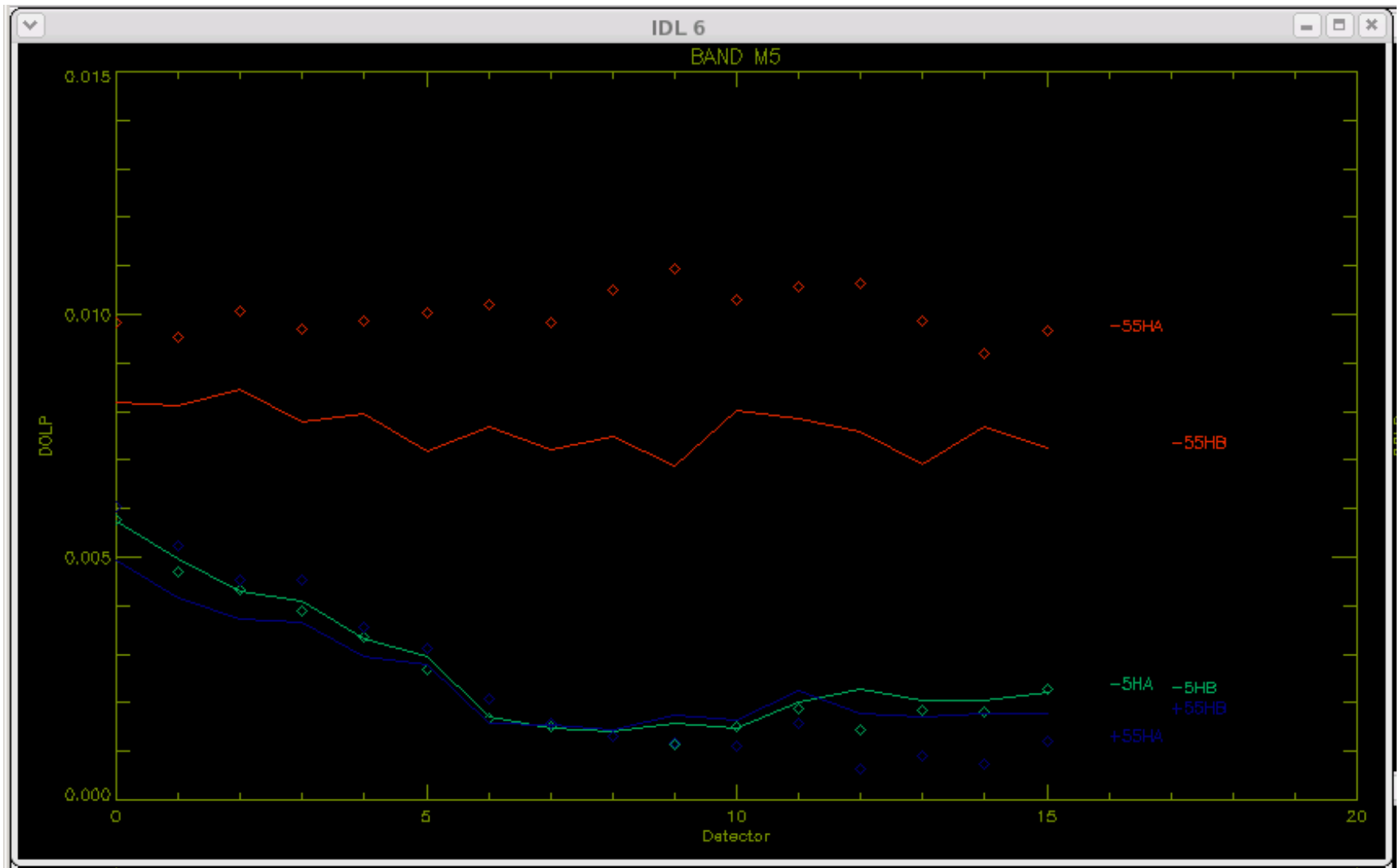
M3 detector dependence and HAMA vs HAMB for 3 scan angles



M4 detector dependence and HAMA vs HAMB for 3 scan angles



M5 detector dependence and HAMA vs HAMB for 3 scan angles



M6 detector dependence and HAMA vs HAMB for 3 scan angles

